Message

From: Brown, Cheryl A. [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=DD6F8A562924439AAF97CA98DDAF1E10-BROWN, CHERYL]
Sent: 12/7/2017 10:40:45 PM
To: Fullagar, Jill [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=7ba061353c314b40a14a8be1ee382ae3-Gable, Jill]
Subject: RE: station locations
Attachments: Carbonate chemistry OR State Waters 2011, 2012, 2013 December 15, 2016.xlsx

That's kind of difficult. Did I send you this file (see attachment)? In it, I have all of Feely's data and extracted the stations within Oregon State Waters (look at sheet "OR State Waters 2011to2013")
Each profile is shaded and in column BF the percent of water column undersaturated for each profile is calculated. It seems like we need to use this metric, since that is what Bednarsek relates to pteropod damage. Deliberative Process / Ex. 5

Deliberative Process / Ex. 5

It might be best to go to the Feely et al. spreadsheet and pick out the points in OR State Waters with percent of water column undersaturated above some threshold.
The stations which had 100% of the water column undersaturated in OR State waters are:

Lat	Long	
44.2	-124.15	
46.19	-123.91	In Columbia River
46.25	-124	Mouth of Columbia River
44.65	-124.13	

Those stations with >70% of water column undersaturated.

Lat	Long	
44.2	-124.15	
45.5	-124.04	
46.19	-123.91	In Columbia River
46.25	-124	Mouth of Columbia
44.65	-124.13	
44.65	-124.13	
44.2	-124.17	

I'm going to forward an email that I sent previously. In it, I calculated the number of observations with aragonite saturation state <1 for different years.

Deliberative Process / Ex. 5

If you look at the next email that I forward you will see where this came from.

It might be best for us to chat, so I can figure out how best to help.
I have looked for additional cruise data but haven't been able to locate any.

Cheryl

From: Fullagar, Jill
Sent: Thursday, December 07, 2017 1:56 PM
To: Brown, Cheryl A. <Brown.Cheryl@epa.gov>
Subject: RE: station locations

Thanks Cheryl.

Deliberative Process / Ex. 5

jill

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From: Brown, Cheryl A.
Sent: Wednesday, December 06, 2017 8:43 AM
To: Fullagar, Jill <Fullagar.Jill@epa.gov>
Subject: RE: station locations

Hi Jill,
As best I can tell the data in Feely et al. 2016 are the same data that were provided to us by Dick Feely et al and what was used in our analysis.
It's really difficult to tell when they are discussing results what stations that I are referring to.

The Sutton et al 2016 data are not within Oregon State Waters.

The Chan et al 2017 paper does have stations within Oregon State Waters.

They have 4 stations that are in OR state waters (Cape Blanco, Cape Arago, Strawberry Hill and Fogarty Creek).
If you want to see the locations of the stations, you can click on the following link. If you zoom in and click on the point it will show the station location name.
http://arcg.is/HPbSK

Here is a relatively new experimental paper on intertidal mussels (*Mytilus californianus*).
Acidification may influencing feeding of these mussels.
http://www.int-res.com/articles/meps2016/563/m563p081.pdf

Cheryl

From: Fullagar, Jill
Sent: Tuesday, November 21, 2017 12:15 PM
To: Brown, Cheryl A. <Brown.Cheryl@epa.gov>
Subject: station locations

Hi Cheryl,

Are you able to help me determine/confirm some station locations in a few articles?

1. Feely et al, 2016
   http://www.sciencedirect.com/science/article/pii/S0272771416302980?via%3Dihub#fig1
   This article also refers to the 2011 and 2013 cruises, so I don't think there are stations within OR waters. I think these are the same stations as you plotted in the attached. How can we tell how far offshore they are? Are you able to calculate that based on the lat/long, or can you tell me how to? I would like to be able to say that while stations are not in OR waters, they are only XX miles outside of OR waters.

2. Sutton et al, 2016
   https://www.biogeosciences.net/13/5065/2016/bg-13-5065-2016.pdf
   It looks to me like the closest site is in CA (CCE2). Does that look correct to you?

3. Chan et al, 2017
   https://static-content.springer.com/esm/art%3A10.1038%2Fs41598-017-02777-y/MediaObjects/41598_2017_2777_MOESM1_ESM.pdf
   The above is the link to the supplementary info with the station locations. Same comment as above: Are you either able to tell how far offshore those stations are, or can you tell me how to determine that from the lat/long?

Thank you so much and happy holidays!

jill

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